

a base substrate;

at least one barrier layer provided over said base substrate,  
said at least one barrier layer including an oxygen-containing  
iridium layer and an oxygen barrier layer, said oxygen barrier  
layer being composed of one of iridium dioxide and ruthenium  
dioxide; and

an adhesion layer disposed between said base substrate and  
said at least one barrier layer, said adhesion layer  
containing at least one material selected from the group  
consisting of zirconium, hafnium, cerium, vanadium, chromium,  
niobium, tantalum nitride, titanium nitride, tantalum silicide  
nitride and tungsten silicide.

Claim 10(amended). The microelectronic structure according to  
claim 1, including a metal-containing electrode layer covering  
said oxygen barrier layer.

Claim 14(amended). The microelectronic structure according to  
claim 12, wherein said at least one metal silicide contains at  
least one silicide selected from the group consisting of  
yttrium silicide, titanium silicide, zirconium silicide,  
hafnium silicide, vanadium silicide, niobium silicide,

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silicide, chromium silicide, iron silicide, cobalt silicide, palladium . . .  
silicide, platinum silicide and copper silicide.

Claim 16(amended). The microelectronic structure according to  
claim 1, further comprising a noble metal layer disposed on  
said barrier layer.